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His Val Cys Met Val Phe Glu Val Leu Gly His His Leu Leu Lys Trp Ile Ile Lys Ser Asn Tyr Gln Gly Leu Pro Val Arg Cys Val Lys Ser Ile Ile Arg Gln Val Leu Gln Gly Leu Asp Tyr Leu His Ser Lys Cys Lys Ile Ile His Thr Asp Ile Lys Pro Glu Asn Ile Leu Met Cys Val Asp Asp Ala Tyr Val Arg Met Ala Ala Glu Pro Glu Trp Gln Lys Ala Gly Ala Pro Pro Pro Ser Gly Ser Ala Val Ser Thr Ala Pro Gln Gln Lys Pro Ile Gly Lys Ile Ser Lys Asn Lys Lys Lys Leu Lys Lys Lys Gln Lys Arg Gln Ala Glu Leu Leu Glu Lys Arg Leu Gln Glu Ile Glu Glu Leu Glu Arg Glu Ala Glu Arg Lys Ile Ile Glu Glu Asn Ile Thr Ser Ala Ala Pro Ser Asn Asp Gln Asp Gly Glu Tyr Cys Pro Glu Val Lys Leu Lys Thr Thr Gly Leu Glu Glu Ala Ala Glu Ala Glu Thr Ala Lys Asp Asn Gly Glu Ala Glu Asp Gln Glu Glu Lys Glu Asp Ala Glu Lys Glu Asn Ile Glu Lys Asp Glu Asp Asp Val Asp Gln Glu Leu Ala Asn Ile Asp Pro Thr Trp Ile Glu Ser Pro Lys Thr Asn Gly His Ile Glu Asn Gly Pro Phe Ser Leu Glu Gln Gln Leu Asp Asp Glu

Asp Asp Asp Glu Glu Asp Cys Pro Asn Pro Glu Glu Tyr Asn Leu Asp 405 410 5 Glu Pro Asn Ala Glu Ser Asp Tyr Thr Tyr Ser Ser Ser Tyr Glu Gln 420 425 10 Phe Asn Gly Glu Leu Pro Asn Gly Arg His Lys Ile Pro Glu Ser Gln 440 435 Phe Pro Glu Phe Ser Thr Ser Leu Phe Ser Gly Ser Leu Glu Pro Val 15 450 455 460 Ala Cys Gly Ser Val Leu Ser Glu Gly Ser Pro Leu Thr Glu Gln Glu 470 475 20 Glu Ser Ser Pro Ser His Asp Arg Ser Arg Thr Val Ser Ala Ser Ser 490 25 Thr Gly Asp Leu Pro Lys Ala Lys Thr Arg Ala Ala Asp Leu Leu Val 500 505 30 Asn Pro Leu Asp Pro Arg Asn Arg Asp Lys Ile Arg Val Lys Ile Ala 515 Asp Leu Gly Asn Ala Cys Trp Val His Lys His Phe Thr Glu Asp Ile 35 530 Gln Thr Arg Gln Tyr Arg Ser Ile Glu Val Leu Ile Gly Ala Gly Tyr 550 40 Ser Thr Pro Ala Asp Ile Trp Ser Thr Ala Cys Met Ala Phe Glu Leu 565 570 575 45 Ala Thr Gly Asp Tyr Leu Phe Glu Pro His Ser Gly Glu Asp Tyr Ser 580 585 50 Arg Asp Glu Asp His Ile Ala His Ile Ile Glu Leu Leu Gly Ser Ile 595 600 Pro Arg His Phe Ala Leu Ser Gly Lys Tyr Ser Arg Glu Phe Phe Asn 55 610 615 620 Arg Arg Gly Glu Leu Arg His Ile Thr Lys Leu Lys Pro Trp Ser Leu 625 630 635 640 60

Phe Asp Val Leu Val Glu Lys Tyr Gly Trp Pro His Glu Asp Ala Ala Gln Phe Thr Asp Phe Leu Ile Pro Met Leu Glu Met Val Pro Glu Lys Arg Ala Ser Ala Gly Glu Cys Arg His Pro Trp Leu Asn Ser Met Ser Val Asn Ser Glu Lys Ser Ser Ser Ser Glu Arg Pro Glu Pro Gln Gln Pro Pro Leu Pro Asp Pro Thr Pro Pro Glu Pro Glu Glu Glu Ile Leu Gly Ser Asp Asp Glu Glu Glu Glu Asp Pro Ala Asp Tyr Cys Lys Gly Gly Tyr His Pro Val Lys Ile Gly Asp Leu Phe Asn Gly Arg Tyr His Val Ile Arg Lys Leu Gly Trp Gly His Phe Ser Thr Val Trp Leu Cys Trp Asp Met Gln Gly Lys Arg Phe Val Ala Met Lys Val Val Lys Ser Ala Gln His Tyr Thr Glu Thr Ala Leu Asp Glu Ile Lys Leu Leu Lys Cys Val Arg Glu Ser Asp Pro Ser Asp Pro Asn Lys Asp Met Val Val Gln Leu Ile Asp Asp Phe Lys Ile Ser Gly Met Asn Gly Ile His Val 835 840 845 Cys Met Val Phe Glu Val Leu Gly His His Leu Leu Lys Trp Ile Ile 850 855 ⁻ Lys Ser Asn Tyr Gln Gly Leu Pro Val Arg Cys Val Lys Ser Ile Ile 875 880

Arg Gln Val Leu Gln Gly Leu Asp Tyr Leu His Ser Lys Cys Lys Ile Ile His Thr Asp Ile Lys Pro Glu Asn Ile Leu Met Cys Val Asp Asp Ala Tyr Val Arg Arg Met Ala Ala Glu Pro Glu Trp Gln Lys Ala Gly Ala Pro Pro Pro Ser Gly Ser Ala Val Ser Thr Ala Pro Gln Gln Lys Pro Ile Gly Lys Ile Ser Lys Asn Lys Lys Lys Leu Lys Lys Lys Gln Lys Arg Gln Ala Glu Leu Leu Glu Lys Arg Leu Gln Glu Ile Glu Glu Leu Glu Arg Glu Ala Glu Arg Lys Ile Ile Glu Glu Asn Ile Thr Ser Ala Ala Pro Ser Asn Asp Gln Asp Gly Glu Tyr Cys Pro Glu Val Lys Leu Lys Thr Thr Gly Leu Glu Glu Ala Glu Ala Glu Thr Ala Lys Asp Asn Gly Glu Ala Glu Asp Gln Glu Glu Lys Glu Asp Ala Glu Lys Glu Asn Ile Glu Lys Asp Glu Asp Asp Val Asp Gln Glu Leu Ala Asn Ile Asp Pro Thr Trp Ile Glu Ser Pro Lys Thr Asn Gly His Ile Glu Asn Gly Pro Phe Ser Leu Glu Gln Gln Leu Asp Asp Glu Asp Asp Glu Glu Asp Cys Pro Asn Pro Glu Glu 1090 1095 Tyr Asn Leu Asp Glu Pro Asn Ala Glu Ser Asp Tyr Thr Tyr Ser 1100 1105 1110

	Ser	Ser 1115	Tyr	Glu	Gln	Phe	Asn 1120		Glu	Leu	Pro	Asn 1125	Gly	Arg	His
5	Lys	Ile 1130	Pro	Glu	Ser	Gln	Phe 1135	Pro	Glu	Phe	Ser	Thr 1140	Ser	Leu	Phe
10	Ser	Gly 1145	Ser	Leu	Glu	Pro	Val 1150		Cys	Gly	Ser	Val 1155	Leu	Ser	Glu
15	Gly	Ser 1160	Pro	Leu	Thr	Glu	Gln 1165		Glu	Ser	Ser	Pro 1170	Ser	His	Asp
20	Arg	Ser 1175	Arg	Thr	Val	Ser	Ala 1180	Ser	Ser	Thr	Gly	Asp 1185	Leu	Pro	Lys
	Ala	Lys 1190	Thr	Arg	Ala	Ala	Asp 1195		Leu	Val	Asn	Pro 1200	Leu	Asp	Pro
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			_	-			Glu 1270				-		_	Tyr	Ser
45	Arg	Asp 1280	Glu	Asp	His	Ile	Ala 1285	His	Ile	Ile	Glu	Leu 1290	Leu	Gly	Ser
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Glu Asp Ala Ala Gln Phe Thr Asp Phe Leu Ile Pro Met Leu Glu 1340 1345 1350

Met Val Pro Glu Lys Arg Ala Ser Ala Gly Glu Cys Arg His Pro
1355 1360 1365

10 Trp Leu Asn Ser 1370